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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,326	04/09/2004	Robert M. Leach	38184.03402US	9700
38647	7590	04/02/2008	EXAMINER	
MILBANK, TWEED, HADLEY & MCCLOY LLP INTERNATIONAL SQUARE BUILDING 1850 K STREET, N.W., SUITE 1100 WASHINGTON, DC 20006			BROWN, COURTNEY A	
		ART UNIT	PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/821,326	LEACH ET AL.	
	Examiner	Art Unit	
	COURTNEY A. BROWN	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 23-48,57 and 96-105 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 23-48,57 and 96-105 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/17/2005, 6/20/2006, 5/4/2007, 6/27/2007, 10/21/2007
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) Notice of Informal Patent Application
- 6) Other: ____.

DETAILED ACTION

Priority

Priority to US Application 60/461,547 filed on April 9, 2003 and US Application filed on November 11, 2003 is acknowledged.

Information Disclosure Statement

Receipt of Information Disclosure Statements filed on March 17, 2005, June 20, 2006, May 4, 2007, and June 27, 2007 and October 12, 2007 is acknowledged.

Claim Rejections- 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 57 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, claim 57 recites, "biocides listed in Table 1." Where possible, claims are to complete in themselves. Incorporation by reference to a specification figure or table "is permitted only in exceptional circumstances where it is

more concise to be incorporate by reference than duplicating a drawing or table into the claim. Incorporation by reference is a necessity doctrine, not for applicant's convenience." See MPEP 2173.05(s).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1.

Claims 23-48, 57, and 96-105 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11, 12, and 20 of copending Application No. 11/299,522 in view of Heuer et al. (US Patent

5,874,025) further in view of Bell (US Patent 5,426,121) and Preston (US Patent 6,274,199).

Copending "522" claims 11, 12 and 20 claims the same method as instant claim 23 except the instant claims require one or more enhancing agents and that the inorganic biocide is a copper compound. However, Heuer et al. teach the use of copper compounds as the inorganic biocide component in wood preservative compositions. Bell and Preston et al. teach the use of enhancing agents such as alkyalkoxylated diamine and a trialkylamine oxide in wood preservative compositions. One of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the trialkylamine oxide and alkoxylation diamine enhancing agents to aid in the penetration of the wood preservative. Further, the use of copper compounds as inorganic biocides in wood preservative compositions is common to one of ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection.

2.
Claims 23-48, 57, and 96-105 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12-15 and 17-20 of copending Application No. 11/220,312 in view of in view of Bell (US Patent 5,426,121) and Preston (US Patent 6,274,199).

Copending "312" claims 12-15 and 17-20 claims the same method as instant claim 23 except the instant claims require one or more enhancing agents . However, Bell and Preston et al. teach the use of enhancing agents such as alkyalkoxylated

diamine and a trialkylamine oxide in wood preservative compositions. One of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the trialkylamine oxide and alkoxylated diamine enhancing agents to aid in the penetration of the wood preservative.

This is a provisional obviousness-type double patenting rejection.

3.

Claims 23-48, 57, and 96-105 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 and 13-18 of copending Application No. 11/471,763 in view of Heuer et al. (US Patent 5,874,025) and further in view of Bell (US Patent 5,426,121) and Preston (US Patent 6,274,199).

Copending "763" claims 1-10 and 13-18 claims the same method as instant claim 23 except the instant claims require one or more enhancing agents. However, Bell and Preston et al. teach the use of enhancing agents such as alkyalkoxylated diamine and a trialkylamine oxide in wood preservative compositions. One of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the trialkylamine oxide and alkoxylated diamine enhancing agents to aid in the penetration of the wood preservative.

This is a provisional obviousness-type double patenting rejection.

4.

Claims 23-48, 57, and 96-105 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 6 and 9-13 of copending Application No. 11/849082 in view of Heuer et al. (US Patent 5,874,025) and further in view of Bell (US Patent 5,426,121) and Preston (US Patent 6,274,199).

Copending "082" claims 1-10 and 13-18 claims the same method as instant claim 23 except the instant claims require using enhancing agents such as alkyalkoxylated diamine and a trialkylamine oxide and other agents selected from emulsifying agents, water repellants, and UV stabilizers and a pressure processes for impregnating wood. However, Heuer et al. teach using emulsifying agents, water repellants, and UV stabilizers and a pressure processes for impregnating wood. Bell and Preston et al. teach the use of enhancing agents such as alkyalkoxylated diamine and a trialkylamine oxide in wood preservative compositions. One of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the trialkylamine oxide and alkoxylated diamine enhancing agents and other wood preservation agents to aid in the penetration of the wood preservative.

This is a provisional obviousness-type double patenting rejection.

5.

Claims 23-48, 57, and 96-105 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9, 13-15, 17 and 23-24 of copending Application No. 11/126,839 in view of Heuer et al. (US Patent 5,874,025) and further in view of Bell (US Patent 5,426,121) and Preston (US Patent 6,274,199).

Copending "839" claims 9, 13-15, 17 and 23-24 claims the same method as instant claim 23 except the instant claims require using enhancing agents such as alkyalkoxylated diamine and a trialkylamine oxide and inorganic/organic biocides. However, Heuer et al. teach using inorganic/organic biocides and Bell and Preston et al. teach the use of enhancing agents such as alkyalkoxylated diamine and a trialkylamine oxide in wood preservative compositions. One of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the trialkylamine oxide and alkoxylated diamine enhancing agents and other wood preservation agents to aid in the penetration of the wood preservative. Further, the use of copper compounds as inorganic and organic biocides in wood preservative compositions is common to one of ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection.

6.

Claims 23-48, 57, and 96-105 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11-23 of copending Application No. 11/116152 in view of Heuer et al. (US Patent 5,874,025).

Copending "152" claims 11-23 claims the same method as instant claim 23 except the instant claims require using agents selected from emulsifying agents, water repellants, and UV stabilizers and a pressure processes for impregnating wood. However, Heuer et al. teach using emulsifying agents, water repellants, and UV stabilizers and a pressure processes for impregnating wood in wood preservative compositions. One of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the emulsifying agents, water repellants, and UV stabilizers combined with pressure processes to aid in the penetration of the wood preservative composition.

This is a provisional obviousness-type double patenting rejection.

7.

Claims 23-48, 57, and 96-105 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 21,24,25,31,35,54,57,58, 66-68 and 70 of U.S. Patent No. 7,001,452 B2 in view of Heuer et al. (US Patent 5,874,025) and further in view of Bell (US Patent 5,426,121) and Preston (US Patent 6,274,199).

Instant claim 23 and patented claims 21, 24,25,31,35,54,57,58, 66-68 is drawn to a method for preserving a wood product by treating it with a composition comprising a copper bearing material and a biocide selected from the group consisting of azoles.

The only difference is the method of the instant invention requires agents selected from emulsifying agents, water repellants, and UV stabilizers. The instant claims also require the use of enhancing agents such as alkyalkoxylated diamine and trialkylamine oxide and a pressure processes for impregnating wood. However, Heuer et al. teach using emulsifying agents, water repellants, and UV stabilizers and a pressure processes for impregnating wood in wood preservative compositions. Bell and Preston et al. teach the use of enhancing agents such as alkyalkoxylated diamine and a trialkylamine oxide in wood preservative compositions. One of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the enhancing agents, emulsifying agents, water repellants, and UV stabilizers combined with pressure processes to aid in the penetration of the wood preservative composition.

8.

Claims 23-48, 57, and 96-105 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-20, 25-29,43-45,49-51, and 53 of U.S. Patent No. 6,843,837 in view of Heuer et al. (US Patent 5,874,025) and further in view of Bell (US Patent 5,426,121) and Preston (US Patent 6,274,199).

Instant claim 23 and patented claims 18-20, 25-29,43-45,49-51, and 53 is drawn to a method for preserving a wood product by treating it with a composition comprising a copper bearing material and a biocide selected from the group consisting of azoles.

The only difference is the method of the instant invention requires the use of enhancing agents such as alkyalkoxylated diamine and trialkylamine oxide. However, Bell and Preston et al. teach the use of enhancing agents such as alkyalkoxylated diamine and a trialkylamine oxide in wood preservative compositions. One of ordinary skill would have been motivated at the time of the instant invention to make this combination in order to receive the expected benefit of the trialkylamine oxide and alkoxyLATED diamine enhancing agents and other wood preservation agents to aid in the penetration of the wood preservative.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 23-34, 38-44, 57, and 96-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heuer et al. (US Patent 5,874,025) in view of Laks et al. (US Patent Application 2002/0051892 A1).

Applicant's Invention

Applicant claims a method for preserving a wood product and a method for wood preservation via pressure treating the wood or wood product with a wood preservative composition comprising: A.) an inorganic biocide (copper nitrate, copper sulfate, copper

acetate, copper carbonate, copper carbonate hydroxide) and an organic biocide (dimethyldidecylammonium carbonate, tebuconazole, dimethyldidecylammonium bicarbonate) present as micronized particles between 0.05 to 1 microns; B.) An agent selected from the group consisting of water repellants, colorants, emulsifying agents, dispersants, stabilizers, and UV inhibitors.

***Determination of the scope and the content of the prior art
(MPEP 2141.01)***

Heuer et al. teach novel wood preservatives and a method of preserving wood (see claims 5-8 of reference) comprising the use of a composition comprising an inorganic biocide such as copper compounds. Heuer et al. teach copper compounds such copper nitrate, copper sulfate, copper acetate, copper carbonate, copper carbonate hydroxide (column 2, lines 37-43); an organic biocide such as ,tebuconazole (column 7, lines 63-65),and emulsifying agents(column 12, lines 26-34), water repellants, and UV stabilizers (column 17, lines 12-17). Heuer et al. also teach that pressure processes as effective impregnating processes for wood protection (column 18, lines 42-45)

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

The instant application claims a method for preserving a wood product and a method for wood preservation via pressure treating the wood or wood product with a wood preservative composition comprising: A.) an inorganic biocide and an organic biocide present as micronized particles between 0.05 to 1 micron and B.) an agent selected from the group consisting of water repellants, colorants, emulsifying agents, dispersants, stabilizers, and UV inhibitors. The difference between the invention of the instant application and that of Heuer et al. is that the instant invention requires that the organic and inorganic biocides are present as micronized particles between 0.005 to 1 micron as opposed to being present as nonmicronized particles. For this reason, the teaching Laks et al. is joined. Laks et al. teach a method for incorporating biocides into wood wherein the particle range of the components is 50-400 nanometers (.05-04 microns) (see figure 8).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of cited references to devise a method for preserving wood and a wood product. Heuer et al. and Laks et al. teach compositions that use tebuconazole and copper salt components, but Laks et al. teach the use of

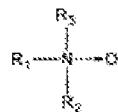
nanoparticles. In addition Preston et al. and Bell teach the use of trialkylamine oxide and alkoxylated diamine enhancing agents. One would be motivated to make this combination in order to receive the expected benefit of the micronized particles which will help the penetration of the wood preservative (Lake et al, [0019]). “It would be *prima facie* obvious to combine two methods each of which is taught by the prior art to be useful for the same purpose in order to form a resultant composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in prior art.” In re Kerkhoven 205 USPQ 1069 (C.C.P.A. 1980).

Claims 35-38 and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heuer et al. (US Patent 5,874,025) in view of Laks et al.(US Patent Application 2002/0051892 A1) and further in view of Bell (US Patent 5,426,121) and Preston et al. (US Patent 6,274,199).

Applicant claims a method for preserving a wood product and a method for wood preservation via pressure treating the wood or wood product with a wood preservative composition comprising: A.) an inorganic biocide (copper nitrate, copper sulfate, copper acetate, copper carbonate, copper carbonate hydroxide) and an organic biocide (dimethyldidecylammonium carbonate, tebuconazole, dimethyldidecylammonium bicarbonate) present as micronized particles between 0.05 to 1 microns; B.) An agent

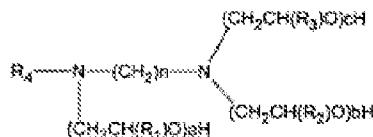
selected from the group consisting of water repellants, colorants, emulsifying agents, dispersants, stabilizers, and UV inhibitors; and C.) An enhancing agent that is a trialkylamine oxide (formula I) and an alkoxylated diamine (formula II) having the following structures

Formula I



where R1 is a linear or cyclic C8 to C40 saturated or unsaturated group and R2 and R3 independently are linear C1 to C40 saturated or unsaturated groups.

Formula II



where n is an integer from 1 to 4; R1, R2, and R3 are independently selected from the group consisting of hydrogen, methyl, ethyl and phenyl; a, b, and c are each integers from 1 to 6; and R4 is fatty alkyl of C8 to C22.

The teachings of Heuer et al. are incorporated herein by reference and are therefore applied in the instant rejection as discussed above.

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

The instant application claims a method for preserving a wood product and a method for wood preservation via pressure treating the wood or wood product with a wood preservative composition comprising: A.) an inorganic biocide and an organic biocide present as micronized particles between 0.05 to 1 micron; B.) An agent selected from the group consisting of water repellants, colorants, emulsifying agents, dispersants, stabilizers, and UV inhibitors; and further comprising an enhancing agent that is a trialkylamine oxide and an alkoxylated diamine. The difference between the invention of the instant application and that of Heuer et al. is that the instant invention requires that the wood preserving composition that further requires an enhancing agent that is a trialkylamine oxide and an alkoxylated diamine as opposed to the use of an emulsifier or a small amount of an alkanolamine. Additionally, the instant invention requires the organic and inorganic biocides are present as micronized particles as opposed to being present as non-micronized particles. For these reasons, the teachings of Laks et al., Bell and Preston et al. are joined. Laks et al. teach a method for incorporating biocides into wood wherein the particle range of the components is 50-400 nanometers (.05-04 microns) (see figure 8). Bell teaches a wood preservative

formulation comprising an alkoxyLATED diamine (column 2, lines 15-23, see formula) (formula II of instant application) and Preston et al. teach a process for treating a wood substrate using a trialkylamine oxide (column 4, lines 19-26) (formula I of instant application).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of cited references to devise a method for preserving wood and a wood product. Heuer et al. and Laks et al. teach compositions that use tebuconazole and copper salt components, but Preston et al. and Bell teach the use of trialkylamine oxide and alkoxyLATED diamine enhancing agents. One would be motivated to make this combination in order to receive the expected benefit of the trialkylamine oxide and alkoxyLATED diamine enhancing agents and the presence of the biocides as micronized particles to help the penetration of the wood preservative. “It would be prima facie obvious to combine two methods each of which is taught by the prior art to be useful for the same purpose in order to form a resultant composition that is to be used for the very same purpose; the idea of combining them flows logically from

their having been individually taught in prior art." In re Kerkhoven 205 USPQ 1069 (C.C.P.A. 1980).

Conclusion

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR Only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electron Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Courtney Brown, whose telephone number is 571-270-3284. The examiner can normally be reached on Monday-Friday from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Courtney A. Brown
Patent Examiner
Technology Center 1600
Group Art Unit 1616

/Johann R. Richter/
Supervisory Patent Examiner, Art Unit 1616